AMENDMENTS TO THE CLAIMS

Claims 1-76. (Cancelled)

77. (New) A method for medical diagnosis of a patient by detecting a target macromolecular structure, which comprises:

(a) generating a low level diagnostic x-ray beam;

(b) providing an amplitude modulation of the x-ray beam with an amplitude modulating signal at a predetermined or empirically determined microwave frequency or range of sequential microwave frequencies;

(c) directing the x-ray beam upon the patient;

(d) detecting and imaging one or more target macromolecule structures involved in production of diseases which absorb said amplitude modulated x-ray beam at said predetermined or empirically determined microwave frequency or range of sequential frequencies; and

(e) comparing the microwave frequency or range of sequential frequencies with known frequencies of absorption of known macromolecules.

78. (New) The method of medical diagnosis of claim 77, wherein a microwave modulating device provides said amplitude modulation, thereby modulating a CT scanner by said amplitude.

79. (New) The method of medical diagnosis of claim 77, wherein said one or more target macromolecule structures comprise or contain one or more cells selected from the group consisting of: oncogenes, abnormal genes, Alzheimer plaques, Alzheimer tangles, pathogens, biological markers, genetic precursors, cells of origin, germ cells, malignant cells, antibodies, atherosclerotic plaques, macromolecular conglomerates, and macromolecular storage disease aggregates.

80. (New) The method of medical diagnosis of claim 79, wherein said pathogen is a virus selected from the group consisting of: herpes simplex virus, AIDS virus, Ebola, smallpox, SARS, hepatitis, encephalitis, spongiform encephalopathy, meningitis, influenza, oncogenic viruses, endocarditis/myocarditis, virus, herpes zoster, polio virus, measles virus, mumps virus, rubella virus, corona viruses, and arthropod borne viruses.

81. (New) A method for security screening by detecting a target macromolecular structure, which comprises:

(a) generating a low level diagnostic x-ray beam;

(b) providing an amplitude modulation of the x-ray beam at a predetermined or empirically determined microwave frequency or range of sequential microwave frequencies;

(c) directing the x-ray beam upon an object or subject;

(d) detecting and imaging one or more target macromolecular structures which absorb said amplitude modulated x-ray beam at said predetermined or empirically determined microwave frequency or range of sequential frequencies;

(e) comparing the microwave frequency or range of sequential frequencies with known frequencies of absorption of known macromolecules; and

(f) identifying said target macromolecular structure.

82. (New) The method of security screening as in claim 81, further comprising:

(g) destroying said target macromolecular structure by applying a high level modulated x-ray beam at said predetermined or empirically determined microwave frequency or range of sequential frequencies.

83. (New) The method of security screening as in claim 81, wherein the object or subject is selected from the group consisting of: persons, vehicles, packages, blood, blood products, and travel baggage.

84. (New) The method of security screening as in claim 81, wherein the or more target macromolecular structure is selected from the group consisting of: explosives, contraband, chemical weapons, biological weapons, viruses, prions, bacteria, fungi, pathogens in media, pathogens in blood, and pathogens in blood products for transfusion.

85. (New) A method of treatment of a pathological condition by destroying a macromolecular structure, their genetic precursors and cells of origin which comprises:

(a) generating a low level diagnostic x-ray beam;

(b) providing an amplitude modulation of the x-ray beam with an amplitude modulating signal on a CT source at a predetermined or empirically determined microwave frequency or range of sequential microwave frequencies;

(c) directing the x-ray beam upon the patient;

(d) detecting and imaging one or more target macromolecule structures involved in production of diseases which absorb said amplitude modulated x-ray beam at said predetermined or empirically determined microwave frequency or range of sequential frequencies;

(e) comparing the microwave frequency or range of sequential frequencies with known frequencies of absorption of known macromolecules;

(f) recognizing a pathological condition as comprising one or more target macromolecular structures; and

(g) applying said modulated CT source to said target macromolecule structures to destroy said pathological condition.

86. (New) The method for treating pathological conditions as in claim 85, wherein the pathological conditions are selected from the group consisting of general medical diseases, malignancies, infectious diseases, prion diseases, storage diseases, immune diseases, autoimmune diseases, degenerative diseases, and genetic diseases.

87. (New) The method for treating pathological conditions as in claim 85, wherein the pathological condition is selected from the group consisting of: thrombrotic or atherosclerotic occlusion or narrowing of arteries causing heart attack and stroke, selective destruction of viruses, AIDS, immune diseases, malaria, mycobacterial infections, fungal infections, ricketsial diseases, spirochete infection, genetically engineered resistant organisms, drug resistant pathogens, arthritis, inherited diseases, Huntington's Chorea, Alzheimer's disease, Parkinson's disease, prion diseases, Jacob Creutzfeld disease, storage diseases characterized by accumulation of abnormal or excessive material in body cells or tissue, Ebola, smallpox, SARS, hepatitis, encephalitis, meningitis, influenza, parasitic diseases, endocarditis/myocarditis, herpes zoster, polio virus, measles virus, mumps virus, or rubella virus, autoimmune diseases, diabetes,

collagen vascular diseases, Guillain-Barre's disease, chronic inflammatory neuropathies, Crohn's disease, ulcerative colitis, asthma, allergic rhinitis, leprosy, glomerulonephritis, allergic disseminated encephalomyelitis, post-viral encephalitis, Dawson's encephalitis, psoriasis, organ transplant rejection, graft-versus host disease, thyroiditis, malignancies, abnormal genes, and germ cells carrying abnormal genes.

88. (New) The method for treating pathological conditions as in claim 86, wherein the pathological conditions are autoimmune diseases and wherein said method identifies and destroys autoimmune disease carrying macromolecular complexes.

89. (New) The method of treating pathological conditions as in claim 88, wherein the autoimmune diseases are diseases where the body reacts against its own tissues.

90. (New) The method of treating pathological conditions as in claim 88, wherein said autoimmune diseases are selected form the group consisting of rheumatoid arthritis, diabetes, collagen vascular diseases, Guillain-Barre's disease, chronic inflammatory neuropathies, Crohn's disease, ulcerative colitis, asthma, allergic rhinitis, glomerulonephritis, allergic encephalomyelitis, post-viral encephalitis, Dawson's encephalitis, psoriasis, organ transplant rejection, graft-versus host disease, and thyroiditis.

91. (New) A method for performing non-invasive surgery using imaging or detection of a target macromolecular structure, said method comprising:

(a) generating a low level diagnostic x-ray beam;

(b) providing an amplitude modulation of the x-ray beam with an amplitude modulated signal from a CT source at a predetermined or empirically determined microwave frequency or range of sequential microwave frequencies;

(c) directing the x-ray beam upon the patient;

(d) detecting and imaging one or more target macromolecule structures which absorb said amplitude modulated x-ray beam at said predetermined or empirically determined microwave frequency or range of sequential frequencies;

(e) comparing the microwave frequency or range of sequential frequencies with known frequencies of absorption of known macromolecules;

(f) recognizing one or more target macromolecular structures; and

(g) applying said modulated CT source to said target macromolecule structures to modify or destroy said target macromolecular structures

92. (New) The method of claim 91, where said target object is selected from the group consisting of: spinal herniated disc material, bile acids around which gallstones develop, gallstones, normal

but pathologically excessive tissue, nerve entrapment syndromes, middle ear osteoblast bone overgrowth, abnormal cells producing epilepsy, diffuse systems of cells of ectopic tissue, malignant cells, glandular tissue, endometriosis, sarcoid, xanthomata, cells responsible for dyskinesias, spinal pain tracts in cases of intractable pain, and one or more target macromolecule structures which control cellular receptors.

93. (New) The method of claim 91, where one or more macromolucular structures which control cellular receptors are selected from the group consisting of: hypersensitive or increased numbers of cellular receptors as is seen in such conditions as tardive dyskinesia, said control consisting of elimination of a target object comprising one or more target macromolecule structures.

94. (New) A method for regeneration of cells and tissues using imaging or detection of a target macromolecular structure, said method comprising:

(a) generating a low level diagnostic x-ray beam;

(b) providing an amplitude modulation of the x-ray beam with an amplitude modulated signal from a CT source at a predetermined or empirically determined microwave frequency or range of sequential microwave frequencies;

(c) directing the x-ray beam upon the patient;

(d) detecting and imaging one or more target macromolecule structures involved in production of diseases which absorb said amplitude modulated x-ray beam at said predetermined or empirically determined microwave frequency or range of sequential frequencies; and

(e) comparing the microwave frequency or range of sequential frequencies with known frequencies of absorption of known macromolecules; and

(f) applying said modulated CT source to said target macromolecule structures to regenerate cells and tissues.

95. (New) The method for regeneration of cells and tissues of claim 94, where said regenerated cells and tissue comprise the spinal cord.

96. (New) The method for regeneration of cells and tissues of claim 95, wherein said spinal cord is regenerated by non-invasively destroying specific target macromolocules as they exist in the macromolecular myelin sheath or at the stage of DNA transcription in the oligodendrocytes that produce them.

97. (New) The method for regeneration of cells and tissues of claim 95, wherein said spinal cord is a totally transected cord, and wherein immediately prior to step (f) above, inhibiting myelin or its contained macromolecules is performed by selection of said myelin or contained macromolecules as target macromolecule structures.

98. (New) The method for regeneration of cells and tissues of claim 94 comprising a process selected from the group consisting of: cloning an entire organism with its component tissues from a set of genes of a somatic differentiated cell, producing differentiated cells and tissues from stem cells, activating somatic differentiated cells to produce transcripts from their genes, and transforming cells to acquire the capacity to produce specific products lost in degenerative diseases.

99. (New) The method for regeneration of cells and tissues of claim 94, wherein resident cells in a degenerated region produce substances needed for physiological function of that area.

100. (New) The method for regeneration of cells and tissues of claim 99, wherein said resident cells in a degenerated region contain specific target macromolecule structures for treating Parkinson's disease, and wherein cells of the basal ganglia produce dopamine and subsume functions of degenerated cells.

101. (New) The method for regeneration of cells and tissues of claim 99, wherein said resident cells in a degenerated region contain specific target macromolecules for treating for Alzheimer's disease, wherein cells in the brain, particularly the prefrontal area, produce acetylcholine and subsume functions of degenerated cells.

102. (New) The method for regeneration of cells and tissues of claim 99, wherein said resident cells in a degenerated region contain specific target macromolecule structures for treating stroke,

wherein cells are induced to differentiate and replicate to replace ischemic cells.

103. A method for imaging and/or detecting a macromolecule structure as in claim 77, said method further comprising:

determining said predetermined or empirically determined microwave frequency or range of sequential frequencies as in step (b) by a process selected from the group consisting of: absorbing by irradiating DNA, RNA or protein microarrays; using computed tomography to image the absorbing entity containing or comprising said macromolecular structure; and varying the frequency of modulation to determine those frequencies that are uniquely absorbed by the target macromolecular structure or entity containing or comprising it.